

**Notice of Allowability**

Application No.

09/677,072

Applicant(s)

KOVARIK ET AL.

Examiner

Oanh Duong

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**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 09/02/2005.
2. ☒ The allowed claim(s) is/are 2-4, 6-12 and 14-18.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying Indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

*Philip Tran*  
PRIMARY EXAMINER

***Reasons for Allowance***

1. The following is an examiner's statement of reasons for allowance:

The invention as claimed. Claims 2, 10 and 18 specially include limitations based upon sharing state memory among at least message topic server, first and second message routers to store both message traffic data and network configuration data; response to a communication fault in least at one of message router, data consumer, message topic server, re-synchronizing interprocess communications connection from the share state memory; and transmitting data messages from said data publisher over said interprocess communication connection, to the data consumer, after said interprocess communication has be resynchronized. Although system and method for resuming the flow of message or re-subscription after a communication fault are firmly documented by cited prior art, the sharing state memory among at least message topic server, first and second message routers to store both message traffic data and network configuration data; response to a communication fault in least at one of message router, data consumer, message topic server, re-synchronizing interprocess communications connection from the share state memory; and transmitting data messages from said data publisher over said interprocess communication connection, to the data consumer, after said interprocess communications connection has be resynchronized limitations are novel and the invention is patentable.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### EXAMINER'S AMENDMENT

2. Authorization for this examiner's amendment was given in a telephone interview with Robert J. Sacco (Registration No. 35,667) on November 27, 2005.

The application has been amended as follows:

The title of the invention is changed to: **"A System and Method for Re-synchronizing Interprocess Communications Connection between Consumer and Publisher Applications by using a Shared State Memory among Message Topic server and Message Routers"**.

The claims of the invention have been amended as follows

2 (Currently amended) A distributed messaging method for publishing topical data messages in a communications network comprising:

receiving in a first message router from a data consumer a request to subscribe to a message topic;

responsive to receiving said subscription request, retrieving from a message topic server a location of a second message router communicatively linked to a data publisher able to provide data messages consonant with said requested message topic;

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sharing state memory among at least said message topic server, said first message router and said second message router to store both message traffic data and network configuration data;

establishing an interprocess communications connection between said first and second message routers;

~~responsive to a communication fault~~ detecting a communications interruption in at least one of said first message router, said second message router, said data consumer, and said message topic server,

re-synchronizing said interprocess communications connection from said shared state memory, said re-synchronizing including terminating said subscription, retrieving from said message topic server a location of any message router communicatively linked to any data publisher able to resume said providing of said data messages consonant with said requested message topic, and establishing an interprocess communications connection between said first message router and said any message router communicatively linked to said any data publisher able to resume said providing of said data messages; and

~~transmitting data messages from said data publisher over said interprocess communications connection~~ resuming a transmission of said data messages from said data publisher, to said data consumer, after said interprocess communication connection has been resynchronized using said interprocess communications connection between said first message router and said any message router

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communicatively linked to said any data publisher able to resume said providing of said data messages.

5. (Cancelled)

6. (Currently amended) The method of claim [[5]] 2, wherein said detecting step comprises:

detecting a communications break between said data publisher and said second router.

7. (Currently amended) The method of claim [[5]] 2, wherein said detecting step Comprises:

detecting a communications break between said first and second routers.

8. (Currently amended) The method of claim [[5]] 2, wherein said detecting step comprises:

detecting said data publisher terminating publication of said requested message topic.

9. (Currently amended) The method of claim [[5]] 2, wherein said step of establishing an interprocess communications connection between said first message router and said message router communicatively linked to [[a]] said any data publisher able to resume

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said providing of said data messages comprises re-establishing an interprocess communications connection between said first and second message routers.

10. (Currently amended) A machine readable storage medium, having stored thereon a computer program for publishing topical data messages in a communications network, said computer program having a plurality of code sections executable by a machine for causing the machine to perform the steps of:

receiving in a first message router from a data consumer a request to subscribe to a message topic;

responsive to receiving said subscription request, retrieving from a message topic server a location of a second message router communicatively linked to a data publisher able to provide data messages consonant with said requested message topic;

sharing state memory among at least said message topic server, said first message router and said second message router to store both message traffic data and network configuration data;

establishing an interprocess communications connection between said first and second message routers;

~~responsive to a communication fault~~ detecting a communications interruption in at least one of said first message router, said second message router, said data consumer, and said message topic server,

re-synchronizing said interprocess communications connection from said shared state memory, said re-synchronizing including terminating said subscription, retrieving

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from said message topic server a location of any message router communicatively linked to any data publisher able to resume said providing of said data messages consonant with said requested message topic, and establishing an interprocess communications connection between said first message router and said any message router communicatively linked to any data publisher able to resume said providing of said data messages; and

~~transmitting data messages from said data publisher over said interprocess communications connection~~ resuming said transmission of said data messages from said data publisher, to said data consumer, after said interprocess communication connection has been re-synchronized using said interprocess communications connection between said first message router and said any message router communicatively linked to said any data publisher able to resume said providing of said data messages.

13. (Cancelled)

14. (Currently amended) The machine readable storage of claim [[13]] 10, wherein said detecting step comprises:

detecting a communications break between said data publisher and said second router.

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15. (Currently amended) The machine readable storage of claim ~~[[13]]~~ 10, wherein said detecting step comprises:

detecting a communications break between said first and second routers.

16. (Currently amended) The machine readable storage of claim ~~[[13]]~~ 10, wherein said detecting step comprises:

detecting said data publisher terminating publication of said requested message topic.

17. (Currently amended) The machine readable storage of claim ~~[[13]]~~ 10 wherein said step of establishing an interprocess communications connection between said first message router and said message router communicatively linked to ~~[[a]]~~ said any data publisher able to resume said providing of said data messages comprises reestablishing an interprocess communications connection between said first and second message routers.

18. (Currently Amended) A distributed messaging system for transmitting topical data messages from data publishers to data consumers comprising:

a message topic server;

a first message router;

a second message router;

a data consumer communicatively linked with said first message router;



a data publisher communicatively linked with said second message router;  
said first message router receiving from said data consumer a request to  
subscribe to a message topic and, responsive to receiving said subscription request,  
retrieving from said message topic server a location of said second message router;  
wherein state memory is shared among at least said message topic server, said  
first message router and said second message router to store both message traffic data  
and network configuration data, an interprocess communications connection is  
established between said first message router and said second message router, data  
messages are transmitted from said data publisher over said interprocess  
communications connection to said data consumer, and responsive to a communication  
fault in at least one of said first message router, said second message router, said data  
consumer, and said message topic server, said interprocess communications  
connection is re-synchronized from said shared state memory;

wherein said interprocess communication connection is re-synchronized by  
terminating said subscription, retrieving from said message topic server a location of  
any message router communicatively linked to any data publisher able to resume said  
providing of said data messages consonant with said requested message topic, and  
establishing an interprocess communications connection between said first message  
router and said any message router communicatively linked to any data publisher able  
to resume said providing of said data messages; and

wherein said distributed messaging system resumes a transmission of said data  
messages from said data publisher, to said data consumer, after said interprocess

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communication connection has been re-synchronized using said interprocess communications connection between said first message router and said any message router communicatively linked to said any data publisher able to resume said providing of said data messages.

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Oanh Duong whose telephone number is (571) 272-3983. The examiner can normally be reached on Monday- Friday, 2:00PM - 10:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Saleh Najjar can be reached on (571) 272-4006. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

O.D  
November 27, 2005

*Philip Tran*  
PRIMARY EXAMINER